



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Jan

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/069,522

05/29/2002

Shogo Ishioka

020239

9372

38834

7590

10/07/2004

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

TERESINSKI, JOHN

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,522

Applicant(s)

ISHIOKA ET AL.

Examiner

Donald M. Lair

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 5 and 6 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims 5 and 6. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, and 4 – 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (US-6,097,202).

4. In regards to Claim 1, Takahashi discloses an inspection apparatus for inspecting a circuit wiring on a circuit board comprising:

a supply means for supplying an electric signal to one of the ends of a circuit wiring and varying a voltage in the circuit wiring (Fig. 1, element 46);

sensor means including a plurality of sensor elements arranged in an array (Fig. 1, element 50), each of the sensor elements being adapted to generate an inspection signal in response to voltage variation of a conductor adjacent thereto (Column 4, lines 47 – 56);

sensor element select means for selecting at least one sensor element adjacent to the other end of the circuit wiring among the plurality of sensor elements (Fig. 1, element SW2); and

output means for outputting the inspection signal from the selected sensor element (Fig. 1, elements SW2 and 48)

wherein said sensor element select means includes a first switching means for controlling the connection between each of said sensor elements and the ground, and said sensor means includes a second switching means for controlling the connection between each of said sensor elements and said output means (Fig. 1, elements SW2 and 50). Since elements SW2 and 50 are electrically connected it is within a reasonable interpretation to say that the sensor means includes the second switching means.

5. In regards to Claim 2, Takahashi discloses an apparatus comprising the elements described above, wherein the supply means is adapted to supply the electric signal to selected one of a plurality of circuit wirings on the circuit board (Fig. 8; Column 4, lines 34 – 42), the sensor element select means is adapted to select all of the sensor elements adjacent to respective ends of the plurality of circuit wirings (Fig. 7B; Column 4, lines 47 – 56), and when the inspection signal is generated in at least one of the sensor elements selected by the sensor element select means, the output means is adapted to output the inspection signal (Fig. 1, elements SW2 and 48).

6. In regards to Claim 4, Takahashi discloses an apparatus comprising the elements described above, further comprising detecting a disconnection in the circuit wiring according to the inspection signal output from the output means (Column 2, lines 10 – 20).

7. In regards to Claim 5, Takahashi discloses an apparatus comprising the elements described above, wherein the inspection apparatus is adapted to be disposed opposed to the circuit board (Fig. 1).

8. In regards to Claim 6, Takahashi discloses an apparatus comprising the elements described above, further comprising a universal tester adapted to be connected to the plurality of inspection apparatuses (Fig. 1).

9. In regards to Claim 7, Takahashi discloses a method for inspecting a circuit wiring on a circuit board by using sensor means including a plurality of sensor elements arranged in an array, each of the sensor elements being adapted to generate an inspection signal in response to voltage variation of a conductor adjacent thereto, the inspection method comprising the steps of supplying the electric signal to one of the ends of the circuit wiring and varying a voltage in the circuit wiring (Fig. 1), selecting at least one sensor element adjacent to the other end of the circuit wiring among the plurality of sensor elements (Fig. 1), and detecting a disconnection in the circuit wiring according to an signal output from the sensor element selected in the step of selecting at least one sensor element (Column 2, lines 10 – 20), wherein said sensor element select means includes a first switching means for controlling the connection between each of said sensor elements and the ground, and said sensor means includes a second switching means for controlling the connection between each of said sensor elements and said output means (Fig. 1, elements SW2 and 50). Since elements SW2 and 50 are electrically connected it is within a reasonable interpretation to say that the sensor means includes the second switching means.

10. In regards to Claim 8, Takahashi discloses a method comprising the steps described above, wherein a plurality of circuit wirings on the circuit board are simultaneously inspected by arranging the sensor means in the plural number (Figs. 1 and 7b).

Art Unit: 2858

Response to Arguments

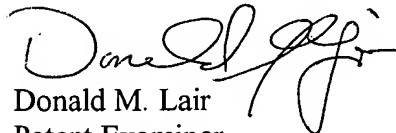
11. Applicant's arguments with respect to claims 1, 2, and 4 – 8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald M. Lair whose telephone number is (703) 305-4450. The examiner can normally be reached on Monday - Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (703) 308-0750. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1436.



Donald M. Lair
Patent Examiner
Art Unit 2858
September 30, 2004



N. Le
Supervisory Patent Examiner
Technology Center 2800